

AMENDMENTS TO THE CLAIMS

1-5. (Canceled)

6. (Currently Amended) An air conditioner comprising:

a case having air inlet and outlet passages therein perpendicular to each other, and a plurality of air inlet and outlets at ends of the air inlet and outlet passages;

a regenerative heat exchanger at a cross point of the air inlet and outlet passages for making indirect heat exchange of the external air and room air flowing through the air inlet and outlet passages;

a compressor in the case;

a flow path control valve for shifting, and guiding a flow path of refrigerant from the compressor proper to respective operation modes;

first and second heat exchangers connected to respective outlets of the flow path control valve and provided to the air inlet and discharge passages for condensing or vaporizing the refrigerant guided by the flow path control valve;

an expansion device on a refrigerant pipeline connected between the first and second heat exchangers, for expanding refrigerant either from the first or second heat exchanger;

a first fan in the air inlet passage for blowing external air into a room through the first heat exchanger; and

a second fan in the air outlet passage for blowing the room air to an exterior through

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the second heat exchanger,

wherein the air inlets include a first air inlet for making the air outlet passage and the room be in communication, and a second air inlet for making the air inlet passage and the exterior be in communication, and

the air outlets include a first air outlet for making the air inlet passage and the room be in communication and a second air outlet for making the air outlet passage and the exterior be in communication.

7. (Original) The air conditioner as claimed in claim 6, wherein the air inlet passages and the air outlet passages are provided by ducts mounted in a crossed form in the case.

8. (Canceled)

9. (Currently Amended) The air conditioner as claimed in claim [[8]] 6, wherein the first air inlet and the first air outlet are formed in two faces of outside faces of the case formed to face different directions.

10. (Currently Amended) The air conditioner as claimed in claim [[8]] 6, wherein the case further includes a plurality of louvers rotatably mounted to the first air outlet for adjusting a discharge direction of air.

11. (Canceled)

12. (Canceled)

13. (Currently Amended) The air conditioner as claimed in claim ~~[[8]]~~ 6, wherein the regenerative heat exchanger includes;

a plurality of plates spaced a distance away from each other for alternate flow of the external air and the room air through each layer, and

a flow guide plate between adjacent plates in parallel to a flow direction of the external air or the room air, each having a cross section of a plurality of continuous folds.

14. (Canceled)

15. (Currently Amended) The air conditioner as claimed in claim ~~[[13]]~~ 6, wherein the first heat exchanger is provided between the regenerative heat exchanger and the first air outlet, and the second heat exchanger is provided between the regenerative heat exchanger and the second air outlet.

16. (Original) The air conditioner as claimed in claim 15, wherein the second heat exchanger is mounted adjacent to the regenerative heat exchanger, and the first heat exchanger is mounted adjacent to the first air outlet.

17. (Original) The air conditioner as claimed in claim 15, wherein the first fan is mounted between the regenerative heat exchanger and the first heat exchanger, and the second fan is mounted between the first air inlet and the regenerative heat exchanger.

18. (Original) The air conditioner as claimed in claim 15, wherein the compressor is mounted adjacent to the second air outlet in the air outlet passage.

19. (Original) The air conditioner as claimed in claim 6, wherein the case further includes;

condensed water receiving grooves in parts of a bottom thereof under lower parts of the first and second heat exchangers respectively,

a drain channel connected to the condensed water receiving grooves, and

a drain provided in the bottom of the drain channel.

20. (Currently Amended) The air conditioner as claimed in claim ~~[[13]]~~ 19, wherein the condensed water receiving grooves have sloped bottoms for leading the condensed water toward the drain channel.

21. (Original) The air conditioner as claimed in claim 19, wherein the drain channel connects one or opposite ends of each of the condensed water receiving grooves.

22. (Original) The air conditioner as claimed in claim 19, wherein the drain channel has a sloped bottom for leading the condensed water toward the drain.

23. (Original) The air conditioner as claimed in claim 22, wherein the drain is provided to a side adjacent to an outdoor.

24. (Currently Amended) The air conditioner as claimed in claim ~~[[8]]~~ 6, wherein the air inlet further includes a third air inlet for making the air inlet passage and the room be in communication.

25. (Original) The air conditioner as claimed in claim 24, wherein the third air inlet is provided between the regenerative heat exchanger and the first air outlet.

26. (Original) The air conditioner as claimed in claim 25, wherein the third air inlet is provided in the bottom of the case.

27. (Original) The air conditioner as claimed in claim 24, further comprising a flow passage opening/closing device in the case for selective opening/closing of the third air inlet and the air inlet passage.

28. (Original) The air conditioner as claimed in claim 27, wherein the flow passage opening/closing device includes;

opening/closing panel hinge coupled to a bottom of the case between the regenerative heat exchanger and the third air inlet,

a driving device mounted in the case, and

a linkage connected between the driving device and the opening/closing panel for selective opening/closing of the third air inlet and the air inlet passage with the opening/closing panel following operation of the driving device.

29. (Original) The air conditioner as claimed in claim 28, wherein the driving device is a reversible motor.

30. (Currently Amended) The air conditioner as claimed in claim [[8]] 6, wherein the compressor, the first and second ~~evaporators~~ heat exchangers, the first and second fans, and the regenerative heat ~~exchanger~~ exchangers are slid into/out of the case through sides of the case in mounting/dismounting the compressor, the first and second ~~evaporators~~ heat exchangers, the first and second fans, and the regenerative heat ~~exchanger~~ exchangers.

31. (Original) The air conditioner as claimed in claim 30, wherein the refrigerant pipelines connected between the compressor, the first and second heat exchangers and wirings are arranged adjacent to a first side of the case.

32. (Currently Amended) The air conditioner as claimed in claim 31, wherein the compressor and the first and second heat exchangers are ~~mounted/dismounting~~ mounted/dismounted through the first side, and the regenerative heat exchanger and the first and second fans are mounted/dismounted through a second side opposite to the first side.

33. (Currently Amended) The air conditioner as claimed in claim 30, wherein ~~the a~~ duct ~~further~~ includes first sliding guides provided at corners where the air inlet passage and the air outlet passage cross for guiding mounting/dismounting of the regenerative heat exchanger.

34. (Original) The air conditioner as claimed in claim 30, further comprising a base plate for fixing the compressor thereon, and a second sliding guide in a bottom part of the case where the air outlet passage is for receiving the base plate in mounting/dismounting the base plate through the side.

35. (Currently Amended) The air conditioner as claimed in claim 30, wherein ~~the a~~ sliding guide is provided in the bottom of the case where the air outlet passage is.

36. (Original) The air conditioner as claimed in claim 30, further comprising:
third sliding guides provided between the regenerative heat exchanger and the second air outlet for mounting/dismounting the second heat exchanger through a side of the case;

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and

fourth sliding guides provided between the regenerative heat exchanger and the first air outlet for mounting/dismounting the first heat exchanger through a side of the case.

37. (Currently Amended) The air conditioner as claimed in claim 36, wherein ~~the~~ a condensed water receiving guide is formed in a bottom part of the case under a space between the third and fourth sliding guides.

38. (Original) The air conditioner as claimed in claim 30, further comprising:

fifth sliding guides between the regenerative heat exchanger and the first air inlet for mounting/dismounting the second fan through the side of the case; and

sixth sliding guides between the regenerative heat exchanger and the first air outlet for mounding/dismounting the first fan through the side of the case.

39. (Original) The air conditioner as claimed in claim 38, wherein the first or second fan includes;

an orifice at a center for passing air,

a body to be inserted in the fifth or sixth sliding guides,

a motor having a rotation shaft positioned at the orifice, and

a blade assembly rotatably connected to the rotation shaft.

40. (Currently Amended) The air conditioner as claimed in claim [[8]] 6, wherein the first or second heat exchanger further includes fins and a jig for covering an outside circumference of the fins.

41. (Original) The air conditioner as claimed in claim 40, wherein the jig includes a frame having one opened side, for covering other sides of the first or second heat exchangers.

42. (Original) The air conditioner as claimed in claim 40, wherein the jig includes;
one pair of jig bodies to be folded for covering a circumference of the first or second heat exchanger from opposite sides, and
a hinge for coupling the one pair of jig bodies.

43. (Currently Amended) The air conditioner as claimed in claim 42, wherein the hinge is provided at a side opposite to ~~the~~ an opened side.

44. (Original) The air conditioner as claimed in claim 42, wherein the jig body is fastened to the heat exchanger with a fastening member.

45. (Currently Amended) The air conditioner as claimed in claim 44, wherein the fastening member is provided at an end of the jig body adjacent to ~~the~~ an opened side.

46. (Original) The air conditioner as claimed in claim 42, wherein the jig body includes at least one drain hole provided in a bottom side for draining down the condensed water from the first or second heat exchanger.

47. (Original) The air conditioner as claimed in claim 46, wherein the case further includes a condensed water receiving groove for storing the condensed water from the drain hole.

48. (Original) The air conditioner as claimed in claim 46, wherein the jig further includes a condensed water container under the bottom side thereof for storing the condensed water from the drain hole.

49. (New) An air conditioner comprising:

a case having an air inlet passage therein for directing external air into a room, an air outlet passage therein, intersecting the air inlet passage, for directing a room air to an exterior, and a plurality of air inlet and outlets at ends of the air inlet and outlet passages;

a regenerative heat exchanger at a intersecting point of the air inlet and outlet passages for making indirect heat exchange of the external air and room air flowing through the air inlet and outlet passages; and

first and second heat exchangers provided on the air inlet passage and on the air outlet passage, respectively, for exchanging heat with an air passing through the air inlet passage

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and through the air outlet passage, respectively,

wherein the air inlets include a first air inlet for making the air outlet passage and the room be in communication, and a second air inlet for making the air inlet passage and the exterior be in communication, and

the air outlets include a first air outlet for making the air inlet passage and the room be in communication and a second air outlet for making the air outlet passage and the exterior be in communication.

50. (New) The air conditioner as claimed in claim 49, wherein the first air inlet and the first air outlet are formed in two faces of outside faces of the case formed to face different directions.

51. (New) An air conditioner comprising:

a case having an air inlet passage therein for directing external air into a room, an air outlet passage therein, intersecting the air inlet passage, for directing a room air to an exterior, and a plurality of air inlet and outlets at ends of the air inlet and outlet passages;

a regenerative heat exchanger at a intersecting point of the air inlet and outlet passages for making indirect heat exchange of the external air and room air flowing through the air inlet and outlet passages;

first and second heat exchangers provided on the air inlet passage and on the air outlet passage, respectively, for exchanging heat with an air passing through the air inlet passage

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and through the air outlet passage, respectively;

an air inlet for making the air inlet passage and the room be in communication; and

a flow passage opening/closing device in the case for selective opening/closing of the air inlet and the air inlet passage.

52. (New) The air conditioner as claimed in claim 51, wherein the air inlet is provided between the regenerative heat exchanger and an air outlet.

53. (New) The air conditioner as claimed in claim 51, wherein the air inlet is provided on the bottom of the case.

54. (New) The air conditioner as claimed in claim 51, wherein the flow passage opening/closing device includes;

opening/closing panel hinge coupled to a bottom of the case between the regenerative heat exchanger and the air inlet,

a driving device mounted in the case, and

a linkage connected between the driving device and the opening/closing panel for selective opening/closing of the air inlet and the air inlet passage with the opening/closing panel following operation of the driving device.

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55. (New) An air conditioner comprising:

a case having an air inlet and outlet passages therein intersecting each other, and a plurality of air inlet and outlets at ends of the air inlet and outlet passages,

a compressor provided in the case;

a regenerative heat exchanger at a intersecting point of the air inlet and outlet passages for making indirect heat exchange of the external air and room air flowing through the air inlet and outlet passages;

first and second heat exchangers provided on the air inlet passage and on the air outlet passage, respectively, for exchanging heat with an air passing through the air inlet passage and through the air outlet passage, respectively;

a first fan in the air inlet passage for blowing external air into a room through the first heat exchanger; and

a second fan in the air outlet passage for blowing the room air to an exterior through the second heat exchanger,

wherein the compressor, the first and second heat exchangers, the first and second fans, and the regenerative heat exchanger are slid into/out of the case through sides of the case in mounting/dismounting the compressor, the first and second heat exchangers, the first and second fans, and the regenerative heat exchanger.

56. (New) The air conditioner as claimed in claim 55, wherein refrigerant pipelines connected between the compressor, the first and second heat exchangers and wirings are

arranged adjacent to a first side of the case.

57. (New) The air conditioner as claimed in claim 56, wherein the compressor and the first and second heat exchangers are mounted/dismounted through the first side, and the regenerative heat exchanger and the first and second fans are mounted/dismounted through a second side opposite to the first side.

58. (New) The air conditioner as claimed in claim 55, further comprising a duct provided in the case and forming the air inlet and outlet passages, the duct includes first sliding guides provided at corners where the air inlet passage and the air outlet passage cross for guiding mounting/dismounting of the regenerative heat exchanger.

59. (New) The air conditioner as claimed in claim 55 further comprising a base plate for fixing the compressor thereon, and a second sliding guide in a bottom part of the case where the air outlet passage is for receiving the base plate in mounting/dismounting the base plate through a side of the case.

60. (New) The air conditioner as claimed in claim 55, further comprising:
a first air inlet for making the air outlet passage and the room be in communication;
a second air inlet for making the air inlet passage and the exterior be in communication;

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a first air outlet for making the air inlet passage and the room be in communication;

a second air outlet for making the air outlet passage and the exterior be in communication;

third sliding guides provided between the regenerative heat exchanger and the second air outlet for mounting/dismounting the second heat exchanger through a side of the case; and

fourth sliding guides provided between the regenerative heat exchanger and the first air outlet for mounting/dismounting the first heat exchanger through a side of the case.

61. (New) The air conditioner as claimed in claim 55, further comprising:

a first air inlet for making the air outlet passage and the room be in communication;

a second air inlet for making the air inlet passage and the exterior be in communication;

a first air outlet for making the air inlet passage and the room be in communication;

a second air outlet for making the air outlet passage and the exterior be in communication;

fifth sliding guides between the regenerative heat exchanger and the first air inlet for mounting/dismounting the second fan through a side of the case; and

sixth sliding guides between the regenerative heat exchanger and the first air outlet for mounding/dismounting the first fan through a side of the case.

62. (New) An air conditioner comprising:

a case having an air inlet passage therein for directing external air into a room, an air outlet passage therein, intersecting the air inlet passage, for directing a room air to an exterior, and a plurality of air inlet and outlets at ends of the air inlet and outlet passages;

a regenerative heat exchanger at a intersecting point of the air inlet and outlet passages for making indirect heat exchange of the external air and room air flowing through the air inlet and outlet passages;

first and second heat exchangers provided on the air inlet passage and on the air outlet passage, respectively, for exchanging heat with an air passing through the air inlet passage and through the air outlet passage, respectively,

wherein, the first or second heat exchanger includes a jig for covering an outside circumference of fins thereon.

63. (New) The air conditioner as claimed in claim 62, wherein the jig includes a frame having one opened side, for covering other sides of the first or second heat exchangers.

64. (New) The air conditioner as claimed in claim 62, wherein the jig includes;
one pair of jig bodies to be folded for covering a circumference of the first or second heat exchanger from opposite sides, and
a hinge for coupling the one pair of jig bodies.

65. (New) The air conditioner as claimed in claim 64, wherein the hinge is provided at a side opposite to an opened side.

66. (New) The air conditioner as claimed in claim 64, wherein the jig body is fastened to the heat exchanger with a fastening member.

67. (New) The air conditioner as claimed in claim 66, wherein the fastening member is provided at an end of the jig body adjacent to an opened side.

68. (New) The air conditioner as claimed in claim 64, wherein the jig body includes at least one drain hole provided in a bottom side for draining down the condensed water from the first or second heat exchanger.

69. (New) The air conditioner as claimed in claim 68, wherein the case further includes a condensed water receiving groove for storing the condensed water from the drain hole.

70. (New) The air conditioner as claimed in claim 68, wherein the jig further includes a condensed water container under the bottom side thereof for storing the condensed water from the drain hole.